Claims:

1. Apparatus for performing call control functions in a packetized telecommunications switch comprising:

a core switching fabric for transmitting traffic channels and call control messages from an input to an output;

a Master Controller connected to said core switching fabric;

a plurality of feature processors connected to said core switching fabric for performing call processing functions;

said Master Controller for receiving call processing request messages, and for transmitting call processing request messages to a selected one of said plurality of feature servers;

said feature servers for generating call control messages for transmission via said core switching fabric to peripheral equipment for implementing a call control function specified in a call control message.

2. The apparatus of Claim 1, wherein said core switching fabric comprises a circuit switching fabric for establishing call traffic connections.

3. The apparatus of Claim 1, wherein said core switching fabric comprises a packet switching fabric for transmitting said call control messages

4. The apparatus of Claim 3, wherein said plurality of feature servers comprises a plurality of different types of feature servers.

5. The apparatus of Claim 3, wherein said plurality of different types of feature servers comprises a plurality of at least one type of feature server.

6. The apparatus of Claim 3, wherein said Master Controller transmits call state information to said selected one feature server.

7. The apparatus of Claim 3, wherein said Master Controller comprises duplicated equipment.

8. The apparatus of Claim 7, each of the duplicated equipments of said Master Controller comprises a plurality of processors.

9. The apparatus of Claim 3, wherein said Master Controller comprises duplicate equipments interconnected by update interface means for rapidly updating memory of one of said duplicated equipments from another of said duplicate

equipments.

10. The apparatus of Claim 3, wherein said core switching fabric is connected to line access interface means.

11. The apparatus of Claim 4, wherein said core switching fabric is connected to trunk access interface means.

12. The apparatus of Claim 4, wherein said Master Controller performs the function of accumulating billing records.

13. The apparatus of Claim 4, wherein at least one of said types of feature processors retains no state information for a call after it has completed processing one of said call processing request messages.

14. The apparatus of Claim 13, wherein all call processing request messages for a feature processor that retains no state information for a call are routed via said Master Controller.

15. The apparatus of Claim 4, wherein at least one of said types of feature processors retains state information for a call after it has completed processing

one of said call processing request messages.

16. The apparatus of Claim 15, wherein ones of said call processing messages destined for one of said feature processors which retain state information for a call are routed directly to that feature processor, bypassing said master controller.

17. A method of processing calls in a switching system comprising the steps of:

said switching system receiving a call processing request message;

said switching system routing said call processing request message to a Master Controller;

said Master Controller receiving and retrieving call state information for the call and terminals of the call from its database;

said Master Controller selecting one of a plurality of feature servers;

said Master Controller sending call processing messages, including call state data to the selected feature server via a core switching fabric of said switching system;

said feature server performing call processing for said call; and

said feature server sending database update and success messages for said call to said Master Controller.

18. The method of Claim 17, further comprising the step of said selected feature processor sending call control messages to appropriate network elements to implement call processing actions.

19. The method of Claim 18, wherein said selected feature server sends said call control messages over said core switching fabric.

20. The method of Claim 17, wherein at least one feature processor retains no state information for a call after it has completed processing one of said call processing request messages, further comprising the step of routing all call processing request messages for a feature processor that retains no state information for a call via said Master Controller.

21. The method of Claim 17, wherein at least one of said feature processors retains state information for a call after it has completed processing one of said call processing request messages, further comprising the step of:

routing ones of said call processing messages destined for one of said feature processors which retain state information for a call are directly to that feature processor, bypassing said Master Controller.

22. The method of Claim 17, wherein a plurality of said plurality of feature servers are identical, and wherein said Master Controller selects one of the plurality of identical feature servers in such a manner as to provide load balancing among the plurality of identical feature servers.